UNDERGROUND OUTLET

Design Survey

The following information shall be obtained and recorded in the field notes:

a. Profile along centerline of outlet.
b. Cross-sections off centerline at critical locations, as needed.
c. Detailed topography at structure locations.
d. Limiting and controlling water and ground surface elevations.
e. Soil investigation, as required, to establish corrosion potential or limitations of trenching, etc.

Design Data

The following shall be considered minimum in the design of underground outlets. The information shall be recorded in the design notes and appropriate data transferred to the construction drawings.

a. Capacity requirements.
b. Hydraulic design.
c. Structural design.
d. Quantity computations.

Drawings and Specifications

The construction drawings shall include but will not be limited to the following:

a. Overall plan view.
b. Location map.
c. Profile showing grades & location of structure components.
d. Structural plans and section views as required.
e. Materials requirements.
f. Installation details.
g. Table of quantities.

Practice specifications along with applicable "Items of Work and Construction Details" shall be provided for each item or phase of construction, as needed to clarify the work.

Layout Survey Notes

The following information shall be recorded in the field notes:

a. Centerline alignment stakes with offset grade stakes, as needed.
b. Structure alignment, layout and reference stakes.

Compliance Checks

The complexity of the structure will dictate the need for compliance checks during construction. All construction and compliance checks shall be recorded as field notes or narratives in the field notes. Compliance checks shall include, but will not be limited to the following:

a. Conduit diameters and gage, class, or rating.
b. Dimensions and elevations of any structures.
c. Adequacy of backfill.
d. Statement of compliance.

As-Built Plans

As-Built drawings shall be prepared to reflect all significant changes in linear measurements, quantities, alignment, materials, or other design modifications. If there are no significant changes, mark the original drawings "As-Built".